



PROVINCIAL
INTERMEDIATE AND
MIDDLE YEARS TEACHERS'
ASSOCIATION

Using Good Questions to Promote Thinking in Math

Carole Fullerton is an numeracy consultant who works with BC teachers to promote mathematical thinking. At the myPITA Fall Online Conference on October 23 she will be presenting **A Year Of Good Questions: Open-ended Math Tasks in A01 and again in B01 and C01 Proportional Reasoning: Fractions, Decimals, and Percent.**

Good questions invite students to think deeply about important mathematical ideas and to apply new concepts. When posed as a choice, they allow students to reason, to calculate, and then to defend their position and explain their strategies.

Take this one, for example – an engaging real life problem:

Shopping Conundrum
Tax is 5%.
The discount is 10%.

Would you rather pay the tax first and then get the discount? Or have the discount applied first and then pay the tax? Why?

Go ahead – try this one yourself; you may be surprised at the difference in your students' thinking!

Good questions in a problem are important.

- How many ways...? (invites multiple solutions and promotes fluency and flexibility)
- What might it be?
- How can you....? How do you know? (focus on exploring strategies for arriving at an answer)
- True or false? Would you rather...? (provides two options and both parts of the question require solving with a decision being made between alternatives)
- What do you know about...? (formative assessment)
- What can you find out about...? (invitation to inquire)

Learn more problematic situations and questioning techniques at Carole's sessions at the myPITA conference! Copies of her books and resources are available at mindfull.ecwid.com.



Image: Lynn Neo, Pixabay

CONTENTS

- | | |
|----|---|
| 3 | CROSS CURRICULAR
Amazing Bread and Butter |
| 4 | CORE FRENCH
French Fortune Teller |
| 5 | MATH
Inequality Symbols the Easy Way |
| 6 | SCIENCE
Brian's Bits: Real Science in the New Science Curriculum |
| 7 | FALL CONFERENCE
Over 60 workshops will be presented online.
Register now! |
| 9 | SOCIAL STUDIES
Where Do You Stand? Using a Decision Framework |
| 12 | CROSS CURRICULAR
Ecology Games |
| 14 | CRUCHLEY'S COLLECTION
Teaching ideas to use with <i>Nothing Stopped Sophie</i> |

Distanced Games

Games that require or encourage physical distancing from the other players are still fun and encourage students to get moving. You already know lots of games but now you need to think how to adapt them into distanced games. Some games can be modified to encourage physical distancing. For example, California Kickball can be played by having an offensive-runners base and a defensive-player's base so that players only need to tag their base with their foot and not the actual player. What Time is it Mr. Wolf can be changed by having the players be bunnies who hop, which is a full body workout. Assign each player, including the wolf, a lane that they need to stay in as they hop their way back to the safe zone rather than being tagged. The following are more distanced game ideas from www.asphaltgreen.org/blog/rep-it-out-games-for-social-distancing.

Detective and Variations

Detective style games involve a player trying to identify who is leading the other players' movements or causing the other players to behave a specific way. All detective style games require players to form a circle and stand six feet away from each other. While everyone's eyes are closed the facilitator selects a person to be "it" by tapping a person on the toe with their foot. The person who is "it" does one of the actions described below while the detective has three guesses to identify who is it. After three guesses they are revealed and a new leader and detective are chosen.

Detective Variation One: Detective Meets Follow the Leader

A great variation that gets everyone moving. The person who is "it" makes movements that everyone else will copy.

Detective Variation Two: Alien aka Wink Murder

The person who is "it" zaps the other players by winking at them. Players who have been zapped must sit down.

Do as I Say, and Not as I do

This is a variation on Simon says. Players form a circle standing six feet away from one another. The first person selected will turn to the person on their right and say, "I am "verb," but they are doing a different action. For example, they are pretending to climb a ladder and they say, "I am brushing my teeth." The person that they turned to will act out the action that was spoken aloud and turn to the next person and state a new action. Players can continue to do their action and the goal is to make it all the way around the circle without making a mistake. Should a mistake happen everyone must do the action that was said, then run on the spot for 10 seconds before restarting.

Hit Record

Assign a movement for each of the buttons found on a remote control: play-jog forward, rewind-hop backwards, pause-freeze, fast forward-running on the spot, etc.. If a player messes up they could do a few sit-ups and then rejoin the game.

Other great activities that encourage physical distancing include hopscotch, obstacle courses, jump rope including double Dutch, playing tag using pool noodles, and tic-tac-toe relay races. Check out Splat and the other games at www.asphaltgreen.org/blog/rep-it-out-games-for-social-distancing.

Resources for you

We teachers have been inundated with links to resources over the last few months. Many of these resources are not lesson plans and are worksheets or non-classroom tested ideas. At mypyta.ca/resources you can find classroom tested resources created by teachers for teachers. Take care yourself and take care of each other.

Justice Education

Fully downloadable units about the Canadian justice system for Grades 5, 6, and 7 in English and French. These units include text resources and lessons, activities, and blackline masters. Also included: Mock trials for a number of fairy-tale and popular culture characters.

Classroom Management

Community building activities and school-to-home communication templates.

Literature Circles Workshop

Video This 90-minute workshop has been edited into sections for your viewing convenience.

Building Math Confidence

Workshop Video How to incorporate math games and practice into math lessons. Each short clip includes links to all needed resources/black line masters.

For members only using the password: compassion.

Dr. Gabor Maté presentations

Three recorded workshops.

Novel Study Resources

Summaries and/or questions related to over 100 novels.

Amazing Bread and Butter

Angela Bragg is a Grade 4/5 teacher in SD 51 Boundary. She has taught Grades 4-12 for 23 years and enjoys sharing her love of hands-on learning experiences with students and colleagues. When she is not teaching, she can be found creating artwork, learning Taekwondo, and exploring in the great outdoors.

Engaging students in Canadian geography can sometimes be a struggle when they have little or no interest in learning about a place they have never visited before. Thanks to the magic of our school library for picture books that have been written about Canadian traditions, historical events, and places, this difficulty can be addressed. I have guided my students to do a little research in finding interesting sites to visit in each province and territory, using creative ways of connecting them to some of the communities and practices that are a part of the Canadian landscape. As a result, my students are taking a journey across Canada.

In learning about Prairie Provinces (Alberta, Saskatchewan, and Manitoba) the class often came across material which described the importance of keeping baking traditions alive in families, and how recipes have been handed down through generations.

Butter in a Jar

You'll need:
Whipping cream
Jar with a lid



One of our adventures in studying the Prairie Provinces included a session asking students to display reading comprehension through accurately reading recipes. Through this activity, they developed their ability to work collaboratively in groups to achieve a common goal.

Other skills that were practised are:

- being able to measure ingredients by choosing correct measurement tools
- telling time
- self-regulating their emotions
- responsibly using materials

In other words, we were able to work on cross-curricular objectives in Language Arts and Math while also building core-competency skills such as personal responsibility, communication, and critical thinking skills.

To achieve all of these wonderful goals, we did something that many Grade 4/5 classrooms have never attempted – we made bread and butter.

This was not ordinary bread and butter; both versions of these recipes are student and classroom friendly. The bread is mainly made in a resealable plastic (Ziploc) bag while the butter is made in a mason jar. Both of those adaptations make this experience clean-up friendly and increase the opportunity for it to be a successful venture that students will remember.

1. Fill your jar half-way with cream.
2. Put the lid on and start shaking.
3. When the swishing sounds stop, remove the lid and check for whipped cream.
4. Secure the lid again and continue to shake until the mixture separates into buttermilk and butter.
5. Remove the lump of butter and save the buttermilk for baking.
6. Stir in a small, dash of salt if you wish.
7. Your butter will not last long and will need to be stored in the fridge for up to a couple days.

Adapted from: Currie-Jackie, J. (2019, August 28). 10-Minute Homemade Butter. Retrieved from: www.happyhooligans.ca/homemade-butter.

Photo: Pixabay

One ingredient not mentioned in either recipe is time. It will take at least two hours for a class to successfully complete the recipes. As well, this adventure entails breaks in activity. For example, while the bread is rising, or when only one group member can complete a task (like knead the dough), it is necessary to have alternate activities for those students not directly involved.

My class had many moments where I interrupted them with a 'commercial break' (a.k.a. teachable moment) to point out something that was going well. I drew attention to such things as the chemical reactions that were occurring in the Ziploc bags, recognizing how a group was doing a particularly great job at dividing up tasks, outlining the skills necessary to shape a loaf, describing what happens when bread rises, etc. Student-driven classrooms have great unscripted moments of learning that can go far deeper than our intended learning outcomes.

The adventure in bread and butter making is well worth the time. Students will have a great opportunity to build a shared experience with their classmates and also partake in a tradition that has historical roots in several cultures and places in Canada.

Bread in a Bag

3 cups all-purpose flour, divided into three parts
 3 tbsp white sugar
 2¼ tsp rapid rise yeast
 1 cup warm water
 1½ tsp salt
 3 tbsp vegetable or olive oil
 2 mini-loaf pans
 2 large resealable plastic bags

1. In a resealable plastic bag place 1 cup of the flour, and all of the sugar, yeast and warm water. Note: do not add all 3 cups of flour at once.
2. Squeeze the air out of the bag and seal.
3. Squish the dough in the bag with your hands until it is well mixed and no longer contains any dry ingredients or small brown pieces of yeast.
4. Let the mixture rest for 10 minutes at room temperature. Bubbles will form; a chemical reaction from the yeast creates CO_2 .
5. Add 1 cup of flour, the oil, and salt into the bag. Seal the bag and squish until well blended.
6. Add the last cup of flour and continue mixing in the bag until well-blended.
7. Remove dough from the bag and put it on a clean, lightly floured surface.
8. Knead for 5-10 minutes or until smooth.
9. Divide dough in half and place each half into a greased mini-loaf pan.
10. Lightly cover with a towel and allow to rise for 30 minutes at room temperature.
11. Bake in a preheated 375°F oven for 25-30 minutes or until bread is golden brown.

Adapted from : Wilkes, L. A. (2014, June 21). *Bread in a Bag*. Retrieved January 1, 2020, from www.yourhomebasedmom.com

French Fortune Teller

Genna Cohen teaches French at North Delta Secondary and Education at UBC.

Looking for a fun review activity that you can use and reuse for teaching French throughout the year? Well, look no further!

As a high school French teacher, I am always hoping that my students come in with some French knowledge, the alphabet in French, days of the week, months of the year, numbers, weather, etc. Often, I find that the majority of the class might know the days of the week and the months of the year, because that is what their teachers in elementary school knew and were comfortable teaching. So, here is an idea to promote the correct use of some other high frequency vocabulary. Do you remember making those origami fortune tellers when you were young? For instructions on how to make a fortune teller, visit www.origamifun.com/origami-fortune-teller.html. They are a great way of promoting high frequency vocabulary in a social and conversational way in French class. Every student makes one, and then they play and interact with their classmates in the target language.

Once the students have folded their fortune tellers, you can have them write the following to finish setting it up:

Outer layer – practise colours: pick any four of: bleu, rouge, vert, violet, jaune, noir, blanc, rose, gris, orange, brun, etc..

First inner layer – practise numbers: pick any eight numbers from 0-20.

Innermost layer (the flaps lift up to reveal a question) – practise simple questions (pick any 8 questions from the following list, or feel free to create your own, to review a particular theme/unit of study):

1. Comment t'appelles-tu?
2. Quel est ton numéro de téléphone? (This can be a made-up phone number to practise numbers)
3. Quels sont les jours de la semaine?
4. Quels sont les mois de l'année?
5. Quel temps fait-il, aujourd'hui?
6. Qu'est-ce que tu aimes mettre sur ta pizza?
7. Quel est ton sport préféré?
8. Quelle est ta chanson préférée?

Photo: Paul Blais, 2006. <https://commons.wikimedia.org/w/index.php?curid=1298948>

myPITA AGM AND EXECUTIVE

The myPITA AGM will be held online on October 23, 2020 at 2:30pm. All members are welcome. To register select session D01 myPITA AGM.

We invite you to join our executive and contribute to organizing professional development conferences, workshops, and resources like this newsletter. Email president@pita.ca for more information.

Math Inequality Symbols The Easy Way

Ann-Marie Hunter has shared her love of Math as a Kamloops teacher for many years.

This is a cool way to help students in Intermediate grades to use the correct symbol when they are comparing numbers, and to learn the associated vocabulary that goes with each symbol.

In primary grades, students are often taught to place a symbol, described as an alligator's mouth, open to the bigger number.

I usually introduce this new method as an 'Intermediate' way to compare numbers (saying that we no longer need alligators, "because we are older and more proficient now").

I also put emphasis on reading the symbol properly after it has been identified.

1. Write the two numbers side by side, with a space between them.
 $34 \quad 25$
2. Put two dots (a colon), next to the larger number.
 $34 : 25$
3. Put one dot (halfway up the number) next to the smaller number.
 $34 : \cdot 25$
4. Then join the dots. The drawing you make will be the correct symbol to describe the two numbers' relationship.
 $34 > 25$



After students use this method to identify the correct symbol, be sure to instruct them to read the relationship out loud.

> means 'is greater than'
 < means 'is less than'

e.g. $34 > 25$, reads: 34 is greater than 25

That way, students make a verbal connection between what the symbol looks like and what it means; eventually, they will not need this process to find the symbol; they'll just know it.

Find more great Math instructional ideas and lesson plans at www.mypita.info/mypita-resource-directory/mathematics.

Vocabulary Variables

Quick Translation Using Google Sheets

Jennie Slack is the President of myPITA and teaches Grades 4/5 in Burnaby.

Do you have a student in your classroom who can read and write in their home language, but is still learning vocabulary in English? Are you teaching a Core French unit and need a vocabulary list? This is a quick and easy way to translate multiple vocabulary words from English into your target language.

1. Go to your Google Drive and open a Google Sheet.
2. Down the first column, type the vocabulary words you want to translate, one vocabulary word per cell.
3. To translate into French, in the first cell of the second column, type the following:
`=googletranslate(A1,"en","fr")` and hit enter.
4. Click on the first cell in the second column, then, with your cursor, grab the blue square at the bottom right of the cell and pull it down the column. This will translate the rest of your column of vocabulary words into French.

To translate into a different language than French, simply replace the "fr" with the two-letter code for your target language. If you are translating to a language that uses gendered articles, you may want to add the article in English (for example, "a coat" to get "un manteau").

Some languages I often need translations for are:

Simplified Chinese: zh-CN
 Filipino: tl
 French: fr
 Hindi: hi
 Japanese: ja
 Korean: ko
 Farsi: fa
 Portuguese: pt
 Russian: ru
 Spanish: es

A complete list of two letter language codes can be found at sites.google.com/site/opti365/translate_codes

Caveat: this process is using Google Translate as the vehicle for translation, so some errors will be inevitable. This is true of any translation attempt we make into languages we ourselves don't speak, barring using a native speaker as an interpreter.

Brian's Bits Real Science in the New Science Curriculum

Brian Herrin is known province-wide for his practical Science workshops as well as co-authoring *Innovations in Science 5* and *Science Probe 4*. He has been a Faculty Advisor at SFU for half a century. His ideas are practical, immediately applicable, and inexpensive.

It is through “real science” that work becomes fun. Living and doing science – beyond texts and videos, is real science. This article gives examples of how to take a required curriculum and add real science to it. If you choose this path, then you can adjust the requirements to fit your own particular interest, be it cooking, writing, reading, sports, biking, or anything else you love to do and would like to share. Put your passion to work!

In Grade 5, one of the big ideas is “Multicellular organisms have organ systems that enable them to survive and interact with their environment.” Students are expected to know the basic structures and functions of body systems: digestive, musculo-skeletal, respiratory, and circulatory. Regularly we teach this using the human body as an example.

My passion, since my university years, is Arthropods – those lovely invertebrates with segmented bodies, jointed appendages, and an exoskeleton. This is a group of organisms that includes insects, arachnids, crustaceans, as well as millipedes, and centipedes. Out of my own enthusiasm, I wanted to inspire my students – just as you would be able to do with your personal enthusiasm.

In this particular science unit, after a basic look at the human multicellular organism, I could give students free rein to specialize as an ambassador for the arthropod life form. The curriculum asks that students study partly from within the environment in which they live - like

the compost pile. So, I would also give each student a formative experience they may never have had before – to catch, identify and raise a compost animal for one month!

To kick them off, I brought in a garbage bag full of garden compost with added fall leaves.

I made a simple square frame from two 2x4 studs cut in half. Into this frame I stapled a sheet of 6 millimeter poly to contain the compost and prevent leaking. This also allowed me to lightly water it with a spray bottle.

Another sheet of poly could be placed over it in the evening to allow any inhabitants to wander around in their natural habitat, just the same as being outdoors, but a lot warmer!

I invited the students to find an organism in the compost that they could raise on their own at home. To allow them to do this, I delivered a lesson on habitats as well as the various systems within an animal – be it a human or an arthropod. By focussing on the necessities of life – food, shelter, and a suitable temperature (I think finding a mate could be put aside for now) I had both multicellular organisms and a complete ecosystem to work with on my classroom floor! I did ask that they try and find more than one example of their chosen animal, although they were only to take one to act as their focal point. They might need to catch another if they had an accident.

I had preselected some easy-to-use websites, and the students were soon engrossed in capturing some creature they would study in detail. Their first task after identification was to find out what they could about the systems within their animal and how their needs could be supplied for a month.

They would keep a diary of their actions and how their animal responded to them, draw the habitat to supply the animal’s needs and, if

their animal didn’t stay alive, analyze what went wrong and start again!

They were to take their animal home in a small container (pill bottle, petri dish, sauce container) while they built a more complete habitat in a clear plastic bakery container found in most supermarkets.

For the first day or so, the only needs of the animal would be a saturated bit of paper towelling to supply both drinking water and humidity. When they had found out what their arthropod needed for food and shelter then they could satisfy those needs as best they could.

Their main project would be to keep a diary of how they kept their animal alive for a month – complete with a care manual for anyone else who wanted to raise the same animal.

They would also be responsible for making a large scale model of their animal that would go on display - at least ten times (10x) larger than life.

Students gave a one minute presentation as an ambassador about their creature. To alleviate stress from the students, the presentation would be short and specific. In my own classroom I would use a stopwatch to time the students, since their presentation had to be exactly one minute long. As students knew the expectations ahead of time, this removed their fear and they knew through practice they would be able to achieve a good mark. My students have always looked forward to the one-minute speech being a part of all my science units.

The final piece of their unit was to write a story in the first person describing how they had shrunken down to half a centimeter-tall size in the compost pile. Their stories could include:

Continued on the back page.

mypita PROVINCIAL
INTERMEDIATE AND
MIDDLE YEARS TEACHERS'
ASSOCIATION

ONLINE CONFERENCE OCTOBER 23

60+ WORKSHOPS FOR MIDDLE AND GRADES 4-9 EDUCATORS

CAROLE FULLERTON MATH

DIANA CRUCHLEY LANGUAGE ARTS

SCOTT HODGES INQUIRY & SOCIALS

LILIANA PESCE CORE FRENCH

AND SO MUCH MORE

ATTEND VIRTUALLY ANYWHERE!



We gratefully acknowledge the financial support of this conference by the BCTF.

register at **mypita.ca**

register at mypita.ca

On October 23, PSA Day 2020 will be excitingly different because our conference will be online and accessible from virtually anywhere. Your myPITA registration gives you access to over 60 workshops, from almost every curricular area, as well as access to workshops offered by the BCTF. As always, myPITA workshops will be relevant, immediately applicable, and many will include hands-on participation plus interaction with other attendees.

CONFERENCE DETAILS:

- Over 60 workshops from almost every curricular area
- Day-of access to the BCTF workshops
- Lunch time socials, discussion topics, and work alikes
- Online marketplace with exhibitors ready to chat with you
- A digital goody bag full of fun surprises
- A myPITA membership that includes:
 - Newsletters mailed to you multiple times a year
 - Access to our exclusive members-only and continually-expanding collection of teaching resources

Advanced selection of myPITA workshops is required, whereas your myPITA registration grants you day-of access to the BCTF workshops which they will publish in the fall.

BCTF Welcome and Keynote A SESSION

8:00-8:45
9:00-10:15

ID	PRESENTER(S)	WORKSHOP	SUBJECT(S)	GRADES
A01	Carole Fullerton	A Year Of Good Questions: Open-ended Math Tasks	Math	4-9
A02	Diana Cruchley	Power of Extreme Writing: Creating Eager & Fluent Writers	Language Arts	4-9
A03	Liliana Pesce	Dialogues and Skits: Communicative FUN in Core French	Core French	4-9
A04	Scott Hodges	Inquiry Toolbox: Building your 21 st Century Classroom	Inquiry	4-9
A05	N. Keyworth/J. Fast	Cultivating a Design Mindset: Weaving ADST throughout	ADST, Cross-Curric.	4-9
A06	Kids Code Jeunesse	Introduction to SCRATCH Coding	ADST-Computers	4-7
A07	Jeff Chiba Stearns	Animation for Any Classroom	Art-Visual	4-9
A08	Kevin Sigaty	Theater Sports in the Classroom	Art-Drama	4-9
A09	Chelsea Birks	Hidden Messages: Developing Digital Literacy	Digital Literacy	4-9
A10	Ray Myrtle	Start UP! Your Class Climate with Routines and Resources	Early Career	4-7
A11	Katherine Mulski	From Draft to Done: Editing Strategies for Writing	Language Arts	4-9
A12	Sheldon Franken	Beauty of Coping: Accepting and Dealing with Stress	Socio-Emotional	4-9
A13	Andreas Clesle	The Reading and Writing Workshop Approach to Literacy	Language Arts	4-7
A14	Katie McCormack	Teaching Multiplication Through Understanding	Math	4-9
A15	Kent Lui	Make Science Ed REAL with Coffee, Knuckle Cracking,...	Science	4-9
A16	Joanne Calder	Current Events: Where Do You Stand?	Social Studies	4-9
A17	Missy Haynes	Myths and Legends: Storytelling with an Indigenous Lens	Language Arts	4-9

B SESSION

ID	PRESENTER(S)	WORKSHOP	SUBJECT(S)	GRADES
B01	Carole Fullerton	A Year Of Good Questions: Open-ended Math Tasks	Math	4-9
B02	Diana Cruchley	Gotcha! 9 Ways to Excite Your Reluctant Writers	Language Arts	4-9
B03	Liliana Pesce	Meaningful Goal: Setting Made Easy and Engaging!	Core Competencies	4-9
B04	Scott Hodges	iPad Author	Language Arts	4-9
B05	Science World	Assessing Computational Thinking with Cross-Curric Activities ADST	4-9	
B06	Bryon Carpenter	Spark Video	ADST-Computers	4-9
B07	Kids Code Jeunesse	Artificial Intelligence and Digital Citizenship	ADST	4-7
B08	Brooke Yantzi	Developing Physical Literacy Through Dance	Art-Dance	4-9
B09	Kevin Sigaty	Assessment, Reporting, and the New Curriculum	Assessment	4-9
B10	Julianne Harvey	If You Can't Fail, You Can't Succeed: How to Practise Risk	Socio-Emotional	4-9
B11	Jas Piche	Planning Interdisciplinary Activities	Cross-Curricular	Middle
B12	Bryan Gidinski	Surfacing Stories: Transforming the Ordinary to Extraordinary	Language Arts	4-9
B13	K. Mulski/N. Keyworth	Motivate the Middle: Dynamic Numeracy Stations	Math	Middle
B14	Katie McCormack	Using Attendance Data to Teach Fractions, Decimals, Percent	Math	4-9
B15	Jennifer Kirkey	Electromagnetism for Elementary Schools	Science	4-7
B16	Joanne Calder	Adventures in Justice Education	Social Studies	5-7
B17	Lori Snyder	Discovering Indigenous and Other Plant Allies for Food	Aboriginal Ed.	4-9

LUNCH: social rooms, visit the exhibitors C SESSION

10:30-11:45
12:00-12:45
1:00-2:15

C01	Carole Fullerton	Proportional Reasoning: Fractions, Decimals, and Percent	Math	4-9
C02	Diana Cruchley	Braveheart Writers: 10 Secrets to Quality Writing	Language Arts	4-9
C03	Liliana Pesce	Les Sports: A Unit You Can Use on Monday!	Core French	4-9
C04	Scott Hodges	Rethinking Social Studies: Skill Based Learning	Social Studies	4-9
C05	Bryon Carpenter	Sparks Fly: Adobe Spark Post and Pages	ADST Technology	4-9
C06	Science World	Digital and Scientific Literacy	ADST	4-9
C07	Brooke Yantzi	Dance and Mental Health	Art-Dance	4-9
C08	Sofia Trujillo/Bev Ellis	Quick and Dirty Ceramic Slab Work	Art-Visual	4-9
C09	Julianne Harvey	Minimalism in the Classroom	Teacher Wellness	4-9
C10	BC Dairy	Bone Zone	PHE	4-7
C11	Bryan Gidinski	Out Loud: Bringing Curriculum Out of the Closet	Socio-Emotional	4-9
C12	K. Mulski/N. Keyworth	Motivate the Middle: Dynamic Writing Strategies	Language Arts	Middle
C13	Sean Smith	UDL: Project Based Learning Ideas and Structures	Cross-Curricular	4-9
C14	Teresa Jenkins	Classroom Small Group Reading Instruction In Action	Language Arts	4-7
C15	Deanna Sue	MyEd: CB-IEP Working Session	Resource	4-9
C16	Jennifer Kirkey	Force and Motion: Newton's Law for Elementary School	Science	4-7
C17	Jan Palmer	Teaching Students with Challenging Behaviours	Socio-Emotional	4-9

D SESSION**myPITA AGM – EVERYONE WELCOME, LOTS OF PRIZES!**

ID	PRESENTER(S)	WORKSHOP	SUBJECT(S)	GRADES
D01	myPITA	AGM: Annual General Meeting	AGM	Everyone
D02	UBC GeeringUp	Engineering with Newspapers	ADST	4-7
D03	Esther Clark	Teaching Core Competency Skills Using Picture Books	Core Competencies	4-7
D04	Julianne Harvey	Build a Moral Conscience in Your Students	Core Competencies	4-9
D05	SPCA	Researching Issues Related to Animals	Social Justice	4-9
D06	BC Dairy	Passport to Healthy Living	PHE	4-7
D07	Bryan Gidinski	Practically Perfect Poetry: From Brainstorm to Form	Language Arts	4-9
D08	J. Palmer & J. Principe	Recipe for Regulation	Socio-Emotional	4-9
D09	Joanna Noakes	Math Rotations: An Individualized Approach to Teaching Math	Math	4-7
D10	Jon Fast	Mentoring: You Have Something to Offer!	Teacher Wellness	4-9
D11	Vickie Jensen	First Nations Culture and Curriculum	Aboriginal Ed.	4-9

BCTF Pension seminar**4:00-5:15pm****CONFERENCE COST****Discount fee available until September 30 /higher price begins October 1**

- Contract BCTF members \$75/\$100
- Non-BCTF members \$120/\$145
- TTOCs, teacher candidates \$25/\$50
- EA/SEAs* \$25/\$50
- Payment in advance by credit card only
- Register as a group of 3 or more to receive 10% off
- Register early to get your first choice of workshops as there are no waiting lists.

Refunds are available up to two weeks before the conference - less the cost of a myPITA membership. Cancellations within two weeks of the conference will be refunded less the cost of a membership and a \$25 administration fee.

Refund requests will be processed by our full time teacher/volunteer registrar within 14 days.

*EA/SEA rates do not include a myPITA membership; you may purchase a subscriber membership at bctf.ca/psa/join.aspx or register as a non-BCTF member and receive a myPITA membership.



register at **myPITA.ca**

2:30-3:45pm**Where Do You Stand?**

Using a Decision Framework to Help Students Think Critically About Big Issues

Joanne Calder has been teaching for over 20 years and is currently a Grade 6 & 7 teacher at Beach Grove Elementary in Tsawwassen. Her passions include Social Studies and Social Justice Education. In addition to working on the Value-Based Decision Project, she also recently collaborated with myPITA to create a Justice Education resource package for Grades 5-7 Socials Studies. You can download the classroom tested and easy to follow Justice Education lesson plans at www.pita.ca/resources.html. She will be presenting **A16 Current Events: Where Do You Stand?** and **B16 Adventures in Justice Education** at the myPITA Fall Online Conference on October 23, 2020.

How do we get our students to think critically about current events? Can we teach them to make thoughtful decisions about where they stand on big issues? These are questions I've been investigating while collaborating with a team of decision scientists and a group of Delta teachers, in an effort to find a practical way to help kids form thoughtful opinions around today's issues. I chose to focus specifically on current events for my part of the project. My goal was to get my class to go beyond the superficial Who? What? Where? When? news article report and be able to think deeply and critically about what matters to them regarding local, national, and international issues.

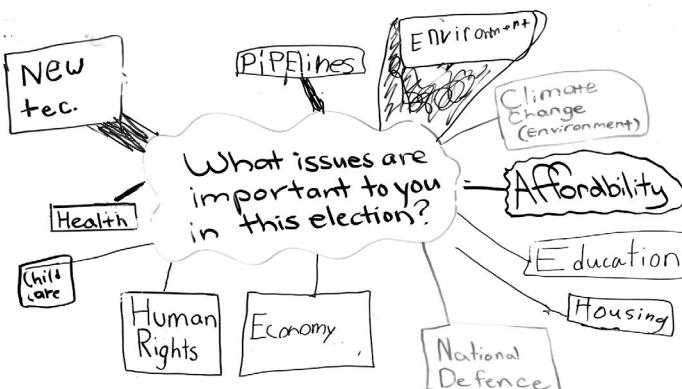
Using the six step *Decision Maker Moves* model that was designed by scientists who study decision-making, I began to work through the process using a variety of current issues with my Grade 6/7 class.

Step 1 Frame the Choice.

The first issue we discussed was, "Who should I vote for in the federal election?" (A reminder to support respectful student discussion of the issue at hand, be professional, and keep your own personal opinions about topics to yourself.) We began by researching the facts behind the issue. I emphasized to my students that they did not have a right to an opinion until they had taken the time to collect information from a variety of reputable sources. How to find these sources was a separate lesson. My favourite places for finding intermediate reading level articles are *Canadian Reader*, *What in the World?*, *Newsela*, and *CBCkids*. For the election, *Macleans Magazine* and *Student Vote* also had excellent elementary school resources, including political leader responses to questions submitted by students. Once we had more detailed information and knew our facts, we moved on to step two.

Step 2 Clarify What Matters.

Students brainstormed a list of what issues were important to them in the election. Issues brainstormed by students are illustrated below:

**Step 3 Generate Options For Our Decision.**

This was very easy with the election as the voting options are provided. With other issues I encourage students to generate at least three options.

Step 4 Explore Consequences.

This involved having students consider, for each option, what would happen to the things that matter most to them. This is where fantastic class discussions happened as we analyzed what evidence we had about parties and candidates and what uncertainties existed for each of our choices. For example, many of my students chose the environment as one of the things that mattered most to them. Because we had researched the facts and they had thought carefully about what mattered to them, my students were able to have an excellent discussion about the environmental policies of each party, and how effective each party would be in implementing their plan. During this process, we created a consequence table (below) as a group. We used sideways or single or double up or down arrows to assess the predicted consequences of each choice. We used a question mark when we felt we

Continued on the back page.

	LPC	Green	NDP	CPC	PPC
human rights	↑	↑	↑↑	↓	↓↓
environment	↑	↑↑	↑	? or ↓	↓↓
taxes	↓	↓↓	↓	↑↑	↑↑
health care	↑	↑	↑↑	↔	↓

Ecology Games

Elaine Jaltema is a newly retired Intermediate teacher who now divides her time between three jobs: a Faculty Advisor in UBC's Teacher Education program, a Burnaby TTOC, and a Wild BC Facilitator.

I have played ecology games for many years with my classes with great success. Bats & Moths is a game I learned on a Stanley Park field trip. Visit Stanley Park Ecology Society's website stanleyparkecology.ca, and see what is offered under the Education tab. It includes school programs, the wonderful overnight class camping trip option, Indigenous plant walks for teachers, and the Urban Stewards Resource CD.

I created the Forest Balance and Intertidal games to fit with what the class was studying. Ecological Web and Camouflage are my versions of well-known games. For many other games and other great resources, have a look at Habitat Conservation Trust Federation's (HCTF) website: hctf.ca. There you can also find out about their Go Grant funding for outdoor field trips around the province, as well as how to get extra support by applying to become a WildBC school.

Bats and Moths

Players around the circle are trees. Inside the circle is a blindfolded bat and three moths who are not blindfolded. Whenever the bat says "Bat" the moths must immediately say "moths" to help the bat find them. The job of the trees is to protect the safety of the bat by saying "tree" if the bat comes too close. This game can be adapted to a marine theme with a dolphin or orca using echolocation.

Forest Balance

Set up skittles around the gym. Divide the group, using pinnies. Yellow pinnies are worn by the environmentalists who guard the skittle "trees" but can't touch them. Red pinnies are worn by loggers who knock them down. Green pinnies are worn by tree planters who replant the skittle trees. Experiment with different ratios between the three groups to keep the forest in balance.



Photo: Pixabay

Intertidal game

Goal: To stay alive while gathering the food you need from each corner of the gym or playing field.

The birds are "it". They run around and try to tag the invertebrates. Meanwhile the invertebrates have to move around the playing area to gather food (beanbags or poker chips) from every corner. They can get only one piece of "food" from a corner before going to gather food from each of the other corners. You can vary the food requirements depending on your age group, timeframe, and supplies. You could use different kinds of items in each corner, or use colour-coded or numbered chips, beanbags, or popsicle sticks to ensure that the invertebrates get to all corners. I often just trust them to go to different corners and put random piles of objects in each corner. I encourage them to visit each corner once and then keep visiting corners until the time is up or they are caught.

The invertebrates are safe if:

- they are holding onto the walls (or fences & trees) like a barnacle or sea star
- they hide under a big rock (ball or cone) like a crab
- they stick together in a cluster of three (like a barnacle or mussel)

The invertebrates can't move when they are doing any of the above protections, and they have a limited time to gather food during the one low tide time. If they get caught, they trade places with the bird, putting all their food back first.

Ecological Web

One person starts by naming an item in the ecosystem, then holds on to the end of a ball of string or yarn, tossing the rest of the ball to another player across the circle. That player then names an item in the ecosystem that connects to what the first player named. They hold on to their part of the string, then toss the ball to another, who names a connection with what the second player named. Once everyone is "connected", the leader removes one item from the ecosystem who drops their string. Everyone who felt their connection loosen drops their string, and so on until everyone is disconnected and the web of life has collapsed.

*Chief Seattle is quoted as saying, "All things are connected like the blood that unites us. We did not weave the web of life, we are merely a strand in it. Whatever we do to the web, we do to ourselves."

Camouflage

To be played in an area with trees. The predator is blindfolded and stands in a central spot. Everyone else

hides while the predator counts to 30. When the blindfold is removed, the predator keeps their feet in one place but tries to spot prey. Prey who were seen come to the predator's place but don't point out the prey who are still hidden. The predator can hold out their fingers and call "How many?" so that prey have to peek out and call out the number of fingers. Then the predator puts the blindfold back on and calls out "Food and water for 25". Prey then have only 25 seconds to gently touch one of the predator's outstretched hands that represent food and water and find a new hiding spot. Prey who were spotted are given the chance to hide again. The process is repeated, with the predator reducing the time given, until the prey have only 15 seconds to get food or water and hide again.

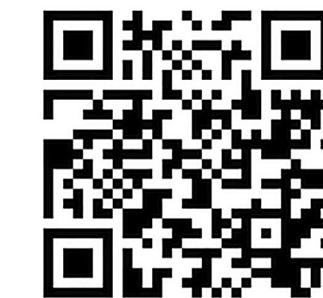
I have often seen versions of Camouflage played as an elimination game, reducing to a few "winners". I create/modify games to omit elimination for the following reasons:

- Competitive activities reduce my success in creating a cooperative team culture.
- One person (or a small number) experience the thrill of winning at the expense of all those who feel they "lost". While many people argue that learning how to lose well is an important life skill, I think this perspective overlooks that in a class full of individuals it is not an even playing field for the strengths that each person brings to the task, nor is it an even playing field about what losing "costs" individual players. Generally, those with the fewest strengths lose the most, and their self-esteem can least afford the loss.
- Everyone who is eliminated is at loose ends, which often causes problems.
- If people who win get to play longer, their skills improve, widening the gap with those who were eliminated earlier. If I can't cut out elimination in a game, I set up two groups playing simultaneously so that losing in one group means just changing groups so everyone always gets to keep playing.



Photo: Holger Grybsch, Pixabay

Tech Tip with Carpenter: QR Codes



Bryon Carpenter, Twitter @bryoncar or bryoncar@gmail.com, teaches middle and high school students at Abbotsford Virtual School. At the myPITA Fall Conference he will be presenting: **B06 Spark Video and C05 Sparks Fly: Adobe Spark Post and Pages.**

Have you ever asked your students to go to a web address or URL (Uniform Resource Locator) by typing in a very specific string of characters? On a good day, this may go quickly, but on a bad day, this ask could derail your lesson plan.

You can copy the URLs from the address bar and email them out so they don't need to be typed, or you can create a link within your learning management system or your own website.

Today's Tech Tip will alleviate URL challenges and allow you to share your digital resources more efficiently across various platforms. I'm going to discuss two webtools that deal with the same issue - how to share a complicated URL with ease.

Here are the tools to help you; they can be used together or separately. You can create:

- a "shortened URL" using a webtool called Bitly.com.
- a QR Code (a two-dimensional "barcode") using QRStuff.com.

These webtools have changed the way I, and many other educators and trainers share information in classes and at conferences.

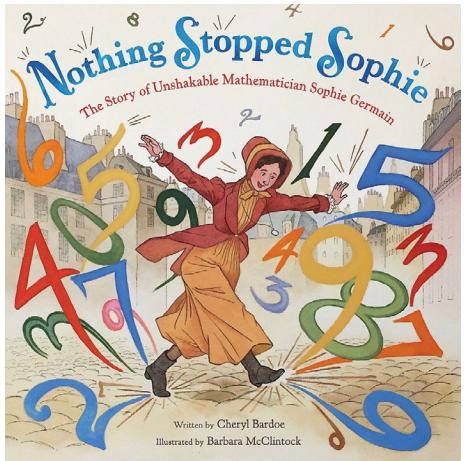
I have created a video tutorial walking you through how to connect a URL to a "short URL" and a QR Code. Once you have established each, you can enable students as young as kindergarteners to travel the WorldWideWeb by typing short URLs or scanning barcodes.

To see my video-tutorial go to bit.ly/MyPITA-techwithcarpenter-Feb2020 or scan the QR Code with your phone's camera.

May your URLs be ever shorter and QR Codes alleviate your pain.

Cruchley's Collection

Diana Cruchley is an award-winning educator and author who has taught at elementary and secondary levels. Her workshops are practical, include detailed handouts, and are always enthusiastically received. H. Diana Cruchley©2020, dianacruchley.com | diana cruchley on Pinterest. Diana will be presenting, on October 23 at the myPITA Fall Online Conference: **A02 Power of Extreme Writing: Creating Eager and Fluent Writers, B02 Gotcha! 9 Ways to Excite Your Reluctant Writers, and C02 Braveheart Writers: 10 Secrets to Quality Writing.**



Nothing Stopped Sophie

Cheryl Bardoe-Author
Barbara McClintock-Illustrator
Little, Brown Books for Young Readers, 2018
978-0316278201, 40 pages

Sophie Germain was an 18th Century math prodigy who simply refused to accept the assigned roles for a female. Her parents, the schools, the science establishment were against her ambitions but nothing stopped her insatiable need to understand and use mathematics. She eventually found the formula that would predict patterns of vibration. We use it to build bridges, skyscrapers, skytrains, and earthquake scenarios...anything that has a structure and can vibrate. In 1816, she became the first woman to win a grand prize from the Royal Academy of Sciences.

Teaching Ideas

Writing to a Pattern

One of the things that holds this story together is the repeated line, "But nothing stopped Sophie." Ask students to write about something they wanted to do and worked hard to do. It can be as simple as mastering a computer program or a game, learning to type, playing an instrument, reading a map, etc. It doesn't have to be amazing, it just has to be a challenge. Ask them to set up the scenario of failing at first, then failing two more times before the final success. At each stage it would be "But nothing stopped (name of student)".

Extreme Writing

There should always be three prompts for an Extreme Writing inspiration. There are four here but only choose any three, otherwise students waste time making a decision. See my book *The Power of Extreme Writing* for a complete description of the process.

1. Sophie sneaks out of bed to study mathematicians. Have you ever snuck out of bed, or brought a flashlight to read under the covers, or....?
2. It was so cold in the bedroom that the ink froze in the bottle. Write experiences you have had with cold weather.
3. Persistence is one of Sophie's characteristics. Tell about something you persisted in.
4. Sophie sends her homework in the mail. Write about good and bad experiences with homework.

The French Revolution and Sophie

A great way of remembering lists of things or connections of things is through mnemonics – memory devices. Most students easily remember "In fourteen hundred and ninety-two, Christopher Columbus sailed the ocean blue," because it rhymes. We can remember HOMES as the names of the Great Lakes: Huron, Ontario, Michigan, Erie, Superior. Think of them as being in your HOME country.

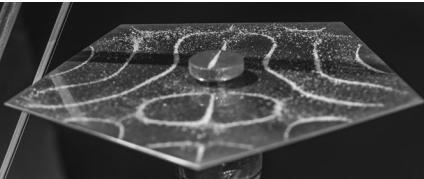
Here's an opportunity for a little cultural literacy where you briefly tell the story of the French Revolution in 1789. The guillotines, the killing of the king and queen and many nobles, the principles involved: liberty, equality, and fraternity. *When Tomorrow Comes* from *Les Misérables* is a great song for an emotional context.

Well, to remember when the French Revolution was, you need to think of the French anthem, *The Marseilles*. Play it briefly so students know the tune, and then they can all sing the following mnemonic to the tune:

Louie XVI was the King of France,
in 1789

He was worse than Louie the 15th
He was worse than Louie the 14th.

He was worse than Lo.o -ie the 13th
He was the worst....pa..pa...pa...pum
Since Louis the 1st.



Matemateca (IME USP) / name of the photographer when stated, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=54267671>

Vibrations That Make Patterns

Ernst Chladni, a German physicist and musician, demonstrated how vibrations could create patterned images. www.sciencefriday.com/articles/seeing-the-patterns-in-sound/ shows a demonstration of how sand or another granular substance when sprinkled on a metal plate, against which you rub a violin bow, will make quite beautiful patterns, that change as the tone and vibration changes. It's much better though, if students can see it "in person." The inspiration for Germain's breakthrough in the math of vibrations started here.

Sophie Germain Overcomes Obstacles to Women Achieving

Sophie can't go to university, is regarded as a bit of a freak prodigy by society, has a famous mathematician who writes to her but stops when he realizes she is a woman, and has trouble winning the prize on vibrations because they keep rejecting her solution – also possibly because she is a woman.

Students may be interested that until the 20th Century women could not: vote, hold property in their own name with the same rights to sell it as a man, open a bank account, apply for a patent for an invention in their own name, attend a university (especially in anything technical or accounting), become a lawyer, or an engineer, and could not serve on a jury. An activity might be to give students a list of things that are normal for women to do now, and ask them to find out when these rights were finally acknowledged.

Arithmetic, A Poem by Carl Sandburg

As long as we are reading about a famous mathematician, introduce students to a famous poet who wrote about arithmetic, yourdailypoem.com/listpoem.jsp?poem_id=2865

Author: Cheryl Bardoe

There are no teaching ideas on her website, but if students enjoy this book, they may also enjoy *Gregor Mendel, the Friar who Grew Peas*, the world's first geneticist.

Fermat's Last Theorem

A math theorem is basically a math statement that is true in all instances and can be proven to be true. In science it would be called a law of science; in math it is a theorem.

Fermat said that the formula $a^n + b^n = c^n$ "doesn't work" for any positive integer value for a, b, or c that is greater than two. That's it, pretty complicated, too complicated for your class. But, the proposition was first conjectured by Pierre de Fermat in 1637 in the margin of a copy of *Arithmetica*. Fermat added that he had a proof that was too large to fit in the margin, but he died and his proof was never found.

Sophie spent a lot of time herself trying to prove it. The attempt to solve it, by many many mathematicians over 300 years, stimulated the development of algebra in the 19th Century, and it was considered one of the hardest math problems in the world. It wasn't until 1995 that British mathematician Andrew Wiles published a successful proof.

Diana has a an exciting new resource for you - **extreme-writing.com**. It's a unique variation on journalling designed to promote fluency and ideation – and reluctant writers love it.

Continued from page 11 Where Do You Stand?.

didn't have enough information to weigh uncertainties and predict an outcome.

Step 5 Weigh Trade Offs.

This includes reviewing the consequence chart and asking the following questions:

- Is there an obvious choice that can be eliminated?
- Is there a clear winner?
- If there are similar choices, does one have more value?
- Do you need to add more values that matter to you?
- Is there a new option you hadn't thought of before?
- Finally, decide where you stand on this issue.

The next issue we tackled was “Should Don Cherry have been fired?” This was such a fun topic! I had the question written on the board and as my kids entered the room and read it, they got into a heated debate. Most of them hadn’t even seen the original clip that caused the controversy but were merely repeating their parents’ and friends’ opinions. We watched the video from Don Cherry’s controversial show, discussed the facts, then worked our way through the decision-making steps including a class developed consequences table. Next, students created a personalized chart based on their own set of values.

Once everyone had completed their individualized charts based on what mattered to them they choose whether they endorsed (wholeheartedly agreed with), accepted (could live with) or opposed (could NOT live with) Don Cherry’s firing and stood in assigned location in the classroom. Selected students shared why they chose to stand where they did which helped them to practice their oral communication skills and demonstrate their critical thinking about the situation.

For more information about how to teach decision-making in your classroom, visit deltalearns.ca/decisions/, a great resource created by Delta School District educators and Decision Scientists.

Continued from page 6 Brian's Bits Real Science.

- a description of where they had wandered for several hours before returning to normal size.
- Meeting at least three different animals and having a major encounter with their chosen animal.
- The animals were to act as they do in nature, but the student writer, by guile, could ride their animal.
- The animals could not talk or communicate with the student in any way.
- The student had to hide from predators just as a similar-sized prey animal would. It was to be a gripping experience!

Students could include an action pose photo or drawing of themselves collaged into a scene from their adventure!

Students could make presentations to each other on their specialty, explaining their particular organism’s ecosystem and how they helped them survive. But this is still not completely “real science” – it’s just “real research.”

If composting is too ambitious, you could buy crickets from a pet store and containers from the dollar store.

If this is a useful concept for you - that of creating real science that will grab both you and your students, here are some additional possibilities:

- There is lots of food science that can be experimented with: simple yeast breads, candy making like Craisin brittle. See pages 3-4 for an easy bread and butter recipe.
- “place-based knowledge about the area in which they live.” What about the organisms that exist around them or in a one foot square cube of earth from the school yard?
- Animals of BC that appear in First Nations art and stories could be of interest to study. What did various Nations know about specific animals compared to what we know now?
- Set up a study of art and electronics - using computers and artificial intelligence to create things of beauty.

Over to you! Make your “real science” program sing with a chorus of voices.



Keep your address up to date with the BCTF to continue receiving the myPITA newsletter.

PM 40063490